

REMARKS

Reconsideration of the application is requested in view of the modifications above and the remarks below.

1. **Rejection Under 35 USC 112, second paragraph**

The Office Action rejected Claims 7-10 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In view of the modifications above, the rejection is moot. Reconsideration is requested.

2. **Rejection Under 35 USC 102**

A. **Rejection of Claims 1-4 Under 35 USC 102 over U.S. 4,380,590 (Chong).**

The Office Action rejected Claims 1-4 under 35 USC 102 over Chong. It is well settled that in order for a prior art reference to anticipate claim, the reference must disclose each and every element of a claim with sufficient clarity to prove its existence in prior art. The disclosure requirement under 35 USC 102 presupposes knowledge of one skilled in the art of claimed invention, but such presumed knowledge does not grant license to read into prior art reference teachings that are not there. See Motorola Inc. v. Interdigital Technology Corp. 43 USPQ2d 1481 (1997 CAFC).

Applicants' invention, as encompassed by Claims 1-4, relates to a process that involves treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice.

Chong discloses emulsion copolymer particles with diameters smaller than 1.5 micrometers and functionalized with cation exchange functional groups, in which such components are prepared and suspended as emulsions in liquid media to form liquid cation exchange materials (See Abstract).

Chong does not anticipate Applicants' invention. Chong's emulsion copolymer particles with diameters smaller than 1.5 micrometers and functionalized with cation

exchange functional groups do not disclose a process that involves treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice.

As indicated above, Chong discloses emulsion copolymer cation exchange resins. Indeed, according to Example 27 of US 4,380,590, for instance, the decolorization according to Chong takes place in an emulsion. That means even the sugar decolorization and clarification as taught in column 10, lines 63+ is done with cation exchange resins and not with monodisperse anion exchangers according to Applicants' invention. As such, Chong fails to provide the teachings necessary to show Applicants' invention existed in the prior art. Reconsideration is requested.

B. Rejection of Claim 6 Under 35 USC 102 Over Chong

The Office Action rejected Claim 6 Under 35 USC 102 Over Chong. The rejection should be withdrawn.

Applicants' invention, as encompassed by Claim 6, relates to a decolorized juice obtained by the process that involves the steps of treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice.

Chong does not anticipate such an invention. As discussed above, Chong's emulsion copolymer particles with diameters smaller than 1.5 micrometers and functionalized with cation exchange functional groups do not disclose a process that involves treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice. Similarly, Chong does not disclose the decolorized juice obtained from such a process. Reconsideration is requested.

C. Rejection of Claim 6 Under 35 USC 102 Over U.S. Pat. No. 4,082,701 (Fries)

The Office Action rejected Claim 6 Under 35 USC 102 Over Fries. This rejection should also be withdrawn. Fries discloses heterodisperse, macroporous Mo-6435

strong basic acrylamide resins not based on styrene and divinylbenzene. Fries does not use monodisperse resins obtained by a jetting process of styrene and divinylbenzene and resulting in particles which have almost the same diameter. As such, Fries does not disclose a decolorized juice obtained by the process that involves the steps of treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice. Reconsideration is requested.

D. Rejection of Claim 6 Under 35 USC 102 Over U.S. Pat. No. 3,791,866 (Kunin)

The Office Action rejected Claim 6 Under 35 USC 102 Over Kunin. The rejection should be withdrawn.

Kunin does not disclose Applicants' invention. In Example VI, for instance, Kunin discloses a weak base heterodisperse anion exchange resin Amberlite IRA-93. In Example VIII Kunin discloses a heterodisperse gel-type strongly basic anion exchange. Kunin does not disclose a decolorized juice obtained by the process that involves the steps of treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice. In Table 1, according to page 11 of our specification, we exhibit the decolorization of sugar solutions using monodisperse anion exchangers according to the present invention in comparison to Resin B (which corresponds to Kunin's Example VIII) and to Resin D (which corresponds to the Fries reference with the exception that Fries does not describe styrene/DVB based ion exchangers but based on acrylamide. Reconsideration is requested.

3. Rejection Under 35 USC 103

A. Rejection of Claim 6 Under 35 USC 103 Over Chong

The Office Action rejected Claim 6 under 35 USC 103 Over Chong. The rejection should be withdrawn. It is well-established that in a sense, virtually all inventions are combinations of old elements (*In re Rouffet*, 47 USPQ2d 1453, 1457), and that the USPTO may often find every element of a claimed invention in the prior

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art. *In re Rouffet*, 47 USPQ2d 1457. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. *In re Rouffet* at 1457. It is also well established that to establish a *prima facie* case of obviousness, the USPTO must satisfy all of the following requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification must have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. *Amgen v. Chugai Pharmaceutical Co.* 18 USPQ 2d 1016, 1023 (Fed Cir, 1991), *cert. denied* 502 U.S. 856 (1991). Third, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496, (CCPA 1970).

One of ordinary skill in the art following the teachings of Chong would not have been motivated to modify Chong, practice or make Applicants' invention. Chong's teachings of using emulsion copolymer particles with diameters smaller than 1.5 micrometers, for instance, would have taught one of ordinary skill in the art away from making a sugar juice with a process that involves treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 μ m, and decolorizing the sugar juice. Reconsideration is requested.

B. Rejection of Claim 6 Under 35 USC 103 Over U.S. Pat. No. 4,082,701 (Fries)

The Office Action rejected Claim 6 Over Fries. The rejection should be withdrawn in view of the modifications above and the remarks below. One of ordinary skill in the art following the teachings of Chong would not have been motivated to modify Fries, practice or make Applicants' invention. Fries's teachings of using heterodisperse, macroporous strong basic acrylamide resins not based on styrene and divinylbenzene would not have suggested to one of Mo-6435

ordinary skill in the art to make a sugar juice with a process that involves treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice. Reconsideration is requested.

C. Rejection of Claim 6 Under 35 USC 102 Over U.S. Pat. No. 3,791,866 (Kunin)

The Office Action rejected Claim 6 Under 35 USC 102 Over Kunin.

The rejection should be withdrawn in view of the modifications above and the remarks below. One of ordinary skill in the art following the teachings of Chong would not have been motivated to modify Kunin and practice or make Applicants' invention.

Kunin's teachings of heterodisperse gel-type strongly basic anion exchange materials would not have suggested to one of ordinary skill in the art to make a sugar juice with a process that involves treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice. Reconsideration is requested.

D. Rejection of Claim 5 Under 35 USC 103 Over Chong

The Office Action rejected Claim 5 Over Chong. Applicants' invention, as encompassed by Claim 5, relates to a process comprising treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice. The treating of the colored juice comprises (i) flushing monodisperse anion exchangers into a heatable glass filter tube, (ii) heating the system from about 20°C to about 100°C, (iii) filtering the aqueous sugar solution to be decolorized via the adsorber resin bed in the loading direction from top to bottom or in reverse flow direction, (iv) draining off adsorber resin with deionized water and finally, (v) regenerating the adsorber resin.

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Chong does not suggest such a process. One of ordinary skill in the art following the teachings of Chong would not have been motivated to modify Chong, practice or make Applicants' invention. As mentioned above, Chong's teachings of using emulsion copolymer particles with diameters smaller than 1.5 micrometers would have taught one of ordinary skill in the art away from making a sugar juice with a process that involves treating a colored sugar juice with a monodisperse anion exchanger having bead polymer spheres with a diameter ranging from 0.45 to 55 mm, and decolorizing the sugar juice. One of ordinary skill in the art would have no motivation to practice such a process to (i) flush monodisperse anion exchangers into a heatable glass filter tube, (ii) heat the system from about 20°C to about 100°C, (iii) filter the aqueous sugar solution to be decolorized via the adsorber resin bed in the loading direction from top to bottom or in reverse flow direction, (iv) drain off adsorber resin with deionized water and finally, (v) regenerate the adsorber resin. Reconsideration is requested.

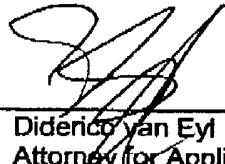
In view of the foregoing amendments and remarks, allowance of the pending claims is earnestly requested.

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